

accepting user manufacturing information input to said screen in place of the default manufacturing information;

generating an item number for each item and storing the manufacturing information input to said screen in a database indexed by said item number;

generating a parts list from the manufacturing details for each item in the functional product structure by accessing each item of each level in the table of the database;

prompting the user to input product assembly time; and

computing an estimated cost of the product based on the parts list and user input product assembly time.

2. The conceptual design tool recited in claim 1 wherein the step of computing an estimated cost comprises the steps of:

using the parts list, accessing quantity and cost for each item in the manufacturing information stored in the database;

multiplying the cost by the quantity accessed from the database for each item and temporarily storing the product;

multiplying the product assembly time by a predefined labor and burden cost and temporarily storing the product; and

summing the temporarily stored products and providing an output of the estimated cost of the final product under design based on the manufacturing information currently in the database.

3. A conceptual design tool method for implementation on a computer, said conceptual design tool method implementing a top-down functional approach to hardware product design, comprising the steps of:

prompting a user at the beginning of a design process to input a product name for a product to be designed;

capturing a product name input by the user in a database;

thereafter prompting a user to input a functional product structure of the product;

capturing functional product structure data input by the user in said data base under said product name;

generating a hierarchical structure of the product structure as the product structure is captured in the database;

displaying said hierarchical structure to the user as it is generated;

successively selecting items in the hierarchical structure;

prompting the user to input manufacturing details for each item selected on a display screen;

providing the user with an option to enter on said display screen default manufacturing information from said database for each selected item;

accessing said database to insert on said display screen default manufacturing information for similar items stored in said database;

providing the user with an option to override default manufacturing information inserted on said display screen from said database;

accepting user manufacturing information input on said display screen in place of said default manufacturing information;

receiving manufacturing information input on said display screen for each item selected; and

generating an item number for each item and storing the manufacturing information in said database indexed by said item number.

4. The conceptual design tool recited in claim 3 further comprising the step of generating a parts list from the manufacturing details for each item in the functional product structure.

5. The conceptual design tool recited in claim 4 further comprising the step of:

using the parts list, accessing quantity and cost for each item in the manufacturing data stored in the database;

multiplying the cost by the quantity accessed from the database for each item and temporarily storing the product;

multiplying the product assembly time by a predefined labor and burden cost and temporarily storing the product; and

summing the temporarily stored products and providing an output of the estimated cost of the final product under design based on the manufacturing information currently in the database.

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